

### REMARKS

Entry of the foregoing and reconsideration of the application identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.114 and in light of the remarks which follow, are respectfully requested.

At the outset, Applicants' representative respectfully notes that in a recent telephone conference with Examiner Henson, an interview with the Examiner has been scheduled for December 11, 2009, at 2 pm. Applicants' representative looks forward to the opportunity to discuss the present application with the Examiner.

By the above amendments, claim 1 has been amended by deleting steps (e) to (j), and new dependent claims 21-26 are directed to the deleted subject matter. Claim 19 has been amended to explicitly recite that momentary transmission values  $I_T(t, r)$  characterizing a current segregation status of the waves radiated with intensity values  $I_o(t, r)$  are repeatedly determined and recorded. Such subject matter is inherent to the recitations of such claim, and is further supported at paragraph [0019] of the instant specification. Newly added claim 27 depends from claim 11; support for such new claim can be found at least at paragraph [0028] of the specification. Entry of the foregoing amendments is appropriate in view of the fact that a Request for Continued Examination is being concurrently filed herewith. See 37 C.F.R. §1.114.

In the Official Action, claims 1-10 and 17-20 stand rejected under 35 U.S.C. §101. Withdrawal of this rejection is respectfully requested for at least the following reasons.

The methods of claims 1 and 18 involve a segregation of monodisperse or polydisperse dispersion samples subjected to gravitation or centrifugation. Such

claims recite that during the segregation by centrifugation or gravitation, momentary transmission values are repeatedly determined and recorded. In view of such recitations, it is clear that the claimed methods are not merely directed to laws of nature, natural phenomena or abstract ideas. The claims are fully compliant with the provisions of 35 U.S.C. §101. Accordingly, withdrawal of the present rejection is respectfully requested.

Claims 1-10, 19 and 20 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Withdrawal of this rejection is respectfully requested for at least the following reasons.

Applicants respectfully note that the meaning of the recited term "optionally" is well understood, and the recitation of such term does not render claim 1 unclear. By the recitation of such term, it is clear that the method of claim 1 may or may not include the optional steps (e) to (j). However, in an effort to expedite prosecution, claim 1 has been amended to delete such subject matter, and new dependent claims 21-26 have been added which are directed to the deleted subject matter.

With regard to the rejection of claim 19, Applicants submit that in view of the recitation of the ratio of  $I_o(t, r) / I_T(t, r)$  in claim 19, it is inherent in such method that momentary transmission values  $I_T(t, r)$  characterizing a current segregation status of the waves radiated with intensity values  $I_o(t, r)$  are repeatedly determined and recorded. In order to expedite prosecution, such claim has been amended to explicitly recite the inherent subject matter. Accordingly, withdrawal of the §112, second paragraph, rejection is respectfully requested.

Claims 1, 2, 4, 11 and 15-19 stand rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 5,095,451 (*Allen*). Claim 7 stands rejected under 35

U.S.C. §103(a) as being obvious over *Allen* in view of U.S. Patent No. 4,975,578 (*Tomimasu et al*). Claim 10 stands rejected under 35 U.S.C. §103(a) as being obvious over *Allen* in view of U.S. Patent Application Publication No. 2002/0147563 (*Lerche et al*). Claim 12 stands rejected under 35 U.S.C. §103(a) as being obvious over *Allen* in view of *Lerche et al* and U.S. Patent No. 3,344,702 (*Wood et al*). Withdrawal of these rejections is respectfully requested for at least the following reasons.

Independent claims 1 and 18 are each directed to a method for an automatic determination of physical, technical method and/or colloidal chemistry parameters by a determination of an attenuation of radiated waves during a segregation of monodisperse or polydisperse dispersion samples subjected to gravitation or centrifugation. Independent claim 11 is directed to a device for an automatic determination of physical, technical method and/or colloidal chemistry parameters.

*Allen* relates to a method and apparatus for determining particle size distribution of particulate samples. See abstract. *Allen* discloses radially scanning a suspension of dispersed particles under a centrifugal force field by passing a beam of radiation from a radiation source through the suspension while moving the radiation source and an associated radiation detector for receiving the beam in a radial direction with respect to the chamber, the radiation source and radiation detector being positioned on opposite sides of the chamber, and the radiation detector continually generating radiation transmission data. See col. 3, lines 45-53.

*Allen* does not disclose or suggest each feature recited in independent claims 1 and 18. For example, *Allen* does not disclose or suggest a method comprising, during the segregation by centrifugation or gravitation, repeatedly determining and

recording momentary transmission values  $I_T(t, r)$  characterizing a current segregation status of the waves radiated with intensity values  $I_o(t, r)$  and/or instantaneous scattering values  $I_S(t, r)$  as a function of a position  $r$  within the samples at a time  $t$ , for one or more wavelengths over the entire length of each sample or in selected partial sections of each sample, as recited in claims 1 and 18. Such claims recite determining and recording values as a function of a position  $r$  within the samples at a time  $t$ , for one or more wavelengths over the entire length of each sample or in selected partial sections of each sample. **That is, for a given time  $t$ , multiple values are determined and recorded over the entire length of each sample or in selected partial sections of each sample.** *Allen* has no disclosure or suggestion of such feature.

By comparison, *Allen* discloses passing a beam of radiation from a radiation source through a suspension. See col. 3, lines 45-48. *Allen* further discloses the use of a 1 mm wide beam in order to prevent loss of precision. See col. 6, lines 38-40. The particle size analyzer of *Allen* is capable of taking only one measurement at a time. Quite clearly, *Allen* has no disclosure or suggestion of determining and recording multiple values, for a given time  $t$ , over the entire length of each sample or in selected partial sections of each sample. In fact, in view of *Allen*'s teaching at col. 6, lines 37-38, that measurement precision is adversely affected as beam width increases, the ordinarily skilled artisan would not have been led to modify *Allen* to arrive at the claimed determining and recording of multiple values, for a given time  $t$ , over the entire length of each sample or in selected partial sections of each sample.

For the reasons discussed above, *Allen* fails to disclose or suggest the methods of independent claims 1 and 18.

Furthermore, *Allen* does not disclose or suggest each feature recited in independent claim 11. For example, *Allen* does not disclose or suggest a spectrometric measurement device with a source producing monochromatic parallel radiation, as recited in such claim. As discussed above, the particle size analyzer of *Allen* is capable of taking only one measurement at a time, and *Allen* discourages the use of a wide beam. Clearly, *Allen* fails to disclose or suggest a source producing monochromatic parallel radiation. Nor does *Allen* disclose or suggest that the spectrometric measurement device registers, digitizes and stores the radiation intensity scattered or transmitted by the respective dispersion sample over the entire length of the sample simultaneously or shifted temporally during segregation, resolved for location and time. Simply put, *Allen* fails to disclose or suggest the device recited in claim 11.

The secondary applied documents (i.e., *Tomimasu et al*, *Lerche et al* and *Wood et al*) fail to cure the above-described deficiencies of *Allen*. In this regard, the Patent Office has relied on *Tomimasu et al* for disclosing means for determining mass density. See Official Action at page 10. *Lerche et al* has been relied on for disclosing the use of a database. See Official Action at page 11. *Wood et al* has been relied on for disclosing a cuvette positioning device with a plurality of cuvettes wherein the positioning can be programmed, and a detecting device. See Official Action at page 12. Even if the secondary applied documents would have been combined with *Allen* in the manner suggested by the Patent Office, the resulting combination nevertheless fails to disclose or suggest repeatedly determining and recording momentary transmission values  $I_T(t, r)$  characterizing a current segregation status of the waves radiated with intensity values  $I_o(t, r)$  and/or instantaneous

scattering values  $I_s(t, r)$  as a function of a position  $r$  within the samples at a time  $t$ , for one or more wavelengths over the entire length of each sample or in selected partial sections of each sample, as recited in claims 1 and 18. Nor does such alleged combination of the applied documents disclose or suggest a spectrometric measurement device with a source producing monochromatic parallel radiation, which registers, digitizes and stores the radiation intensity scattered or transmitted by the respective dispersion sample over the entire length of the sample simultaneously or shifted temporally during segregation, resolved for location and time.

For at least the above reasons, it is apparent that the claims are non-obvious over the applied documents. Accordingly, withdrawal of the §103(a) rejections is respectfully requested.

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such action is earnestly solicited. If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: November 10, 2009

By: 

Roger H. Lee

Registration No. 46317

P.O. Box 1404  
Alexandria, VA 22313-1404  
703 836 6620